

IN THE CLAIMS

Please amend the claims as follows:

1. (Previously Presented) A device for recording information on a record carrier, said device comprising:

recording means for recording marks representing digitally encoded real-time information, including video information, encoded according to a predefined recording format;

an input unit for receiving a data stream constituting an enhanced user program, the data stream comprising the real-time information and application data objects, at least one subset of the application data objects constituting data for providing to a user at least one interactive application while rendering the real-time information;

message means for extracting messages from the data stream, the messages containing the application data objects;

parsing means for generating application control information; and

control means for storing the messages in a message file separate from the real-time information as a series of the messages for the program, and for storing the application control information in a message info file, the application control information including accessing information for accessing the messages in the message file.

2. (Previously Presented) The device as claimed in claim 1, wherein the parsing means includes, for a message, at least one of the following items as accessing information in the message info file:

a message number, the message number identifying the message in the series of the messages;

a message type indicator;

a start location in the message file;

length of the message;

number of a succeeding message.

3. (Previously Presented) The device as claimed in claim 1, wherein the parsing means includes active period information in the message info file, said active period information including a start time and an end time with respect to a presentation time of the program.

4. (Previously Presented) The device as claimed in claim 1, wherein the message means removes redundant information from the messages extracted from the data stream.

5. (Previously Presented) The device as claimed in claim 4, wherein the message means removes, as the redundant information, header information of packets, including headers of transport stream packets or sections headers as used in compressed video data

transmission (MPEG2), or download-data-block headers as used in multimedia data (MHP).

6. (Previously Presented) The device as claimed in claim 4, wherein the message means removes, as the redundant information, messages that are repeatedly transmitted, including messages repeatedly transmitted in a data carousel.

7. (Currently Amended) A device for reading information from a non-transitory record carrier for rendering an enhanced user program, said device comprising:

reading means for reading marks representing digitally encoded real-time information, including video information, encoded according to a predefined recording format; and

control means for providing to a user at least one interactive application based on at least one subset of application data objects while rendering the real-time information, said control means retrieving application control information from a message info file having been stored on said record carrier separate from the real-time information, and retrieving messages comprising a message header providing information about a respective message from a series of messages for the enhanced user program from a message file, the application control information including accessing information based upon the information about the respective message provided in the message header, said control means accessing messages in the series of messages in the message

file, and retrieving the messages from the series of messages from the message file based on the accessing information included in the application control information, the messages containing the application data objects, and the message file having been stored on said record carrier separate from the real-time information.

8. (Currently Amended) A non-transitory record carrier carrying information for constituting an enhanced user program, said record carrier having marks in a track representing:

digitally encoded real-time information, including video information, encoded according to a predefined recording format,

a message file separate from the real-time information, the message file comprising messages having a message header providing information about a respective message, stored in a series of messages, the messages containing application data objects, at least one subset of the application data objects constituting data for providing to a user at least one interactive application while rendering the real-time information, and

a message info file separate from the real-time information and from the message file, the message info file containing application control information including accessing information based upon the information about the respective message provided in the message header, for accessing the messages from the series of messages in the message file.

9. (Previously Presented) The non-transitory record carrier as claimed in claim 8, wherein the message info file contains, as the accessing information for a message, at least one of the following items:

- a message number, the message number identifying the message in the series of the messages;

- a message type indicator;

- a start location in the message file;

- length of the message;

- start of an active period;

- end of the active period;

- number of succeeding message.

10. (Previously Presented) A method of recording information on a record carrier, said method comprising the steps of:

- recording digitally encoded real-time information, including video information, encoded according to a predefined recording format;

- receiving a data stream constituting an enhanced user program, the data stream comprising the real-time information and application data objects, at least one subset of the application data objects constituting data for providing to a user at least one interactive application while rendering the real-time information;

- extracting messages from the data stream, the messages containing the application data objects;

- generating application control information; and

storing the messages in a message file separate from the real-time information as a series of the messages for the program, and storing the application control information in a message info file, the application control information including accessing information for accessing the messages in the message file.

11. (Cancelled).